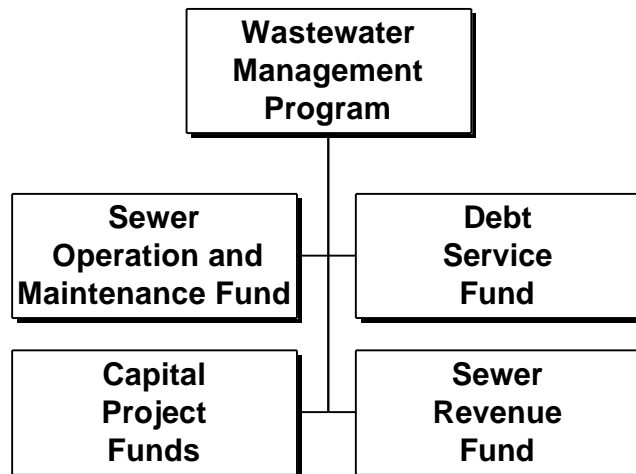


# **WASTEWATER MANAGEMENT PROGRAM FY 2002 OVERVIEW**



# WASTEWATER MANAGEMENT PROGRAM

## FY 2002 OVERVIEW

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The Wastewater Management Program (WMP) is operated, maintained and managed within the Department of Public Works and Environmental Services (DPWES). In order to plan, collect, treat, and monitor the wastewater within Fairfax County in the most economical way while maintaining the highest regard for public safety and the environment, the program has been aligned by specific business functions to provide County residents and businesses with quality sewer service.

The strategic planning and overall business monitoring is the responsibility of the Wastewater Administration Division. The program currently includes the County-owned wastewater treatment plant (54 million gallons per day (MGD) capacity), approximately 3,100 miles of sewer lines, 60 pump stations, 50 metering stations, and covers approximately 234 square-miles of the County's 399 square-mile land area. Capacity entitlement at the other regional facilities totals 80 MGD. The sewer maintenance and operations will be performed utilizing a total of 358/357.5 SYE positions in FY 2002. The WMP anticipates a total of 325,000 households in Fairfax County will be connected to public sewer in FY 2002.

In addition, to providing County residents and businesses with sewer service, Fairfax County provides sewer service to other nearby jurisdictional entities through "Sales of Service" agreements. The County holds Sales of Service agreements with Arlington County, the cities of Falls Church and Fairfax, the towns of Herndon and Vienna, Fort Belvoir, the Ogden Martin Waste-to-Energy facility and the Fairfax County Water Authority. These entities share the capital and operating costs of the WMP on the basis of actual wastewater flow and reserved treatment capacity.

The Wastewater Collection Division (WCD) is responsible for the County's wastewater collection and conveyance system consisting of sewers, force mains, pumping stations and metering stations. As a cost-savings measure, the WCD continues to outsource tasks, such as sewer rehabilitation, easement clearing, and lawn mowing. Additionally, the WCD continues to update its office computer and information management systems in order to improve operations.

The Wastewater Treatment Division (WWTD) is responsible for operating and maintaining the County's wastewater treatment facility, the Noman M. Cole, Jr. Pollution Control Plant (NCPCP). The WWTD continues to produce a quality effluent to meet regulatory and permit requirements, despite the major construction program occurring throughout the plant site. The NCPCP is currently undergoing an expansion of capacity from 54 MGD to 67 MGD. This project also includes improvements such as odor control and nitrogen removal to meet requirements of the Chesapeake Bay agreement.

The system supplements the capacity of its own collections and treatment facilities through "Treatment by Contract" agreements with the District of Columbia, the Alexandria Sanitation Authority, the Upper Occoquan Sewage Authority, and Arlington County. As stated in the individual agreements, the County pays its share of operating, capital, and/or debt costs of each entity's system based on actual wastewater flows and allocated capacity, respectively.

In FY 2002, the County is projected to provide for the treatment of 108.39 million gallons of wastewater per day. More than forty percent of this flow is treated at the NCPCP. The flow is distributed between the NCPCP and the interjurisdictional facilities as detailed in the table below. The table also includes the capacity utilization percentage and the available (unused) capacity for each plant.

<b>Treatment Plant</b>	<b>FY 2002 Projected Daily Average (MGD)</b>	<b>Capacity Utilization (%)</b>	<b>Available Capacity (MGD)</b>
DCWASA Blue Plains	27.40	88%	3.60
Noman M. Cole, Jr.	46.28	86%	7.72
Alexandria Sanitation Authority	20.77	64%	11.63
Arlington County	2.35	78%	0.65
Upper Occoquan Sewage Authority	11.59	42%	16.01
<b>Total</b>	<b>108.39</b>	<b>73%</b>	<b>39.61</b>

# WASTEWATER MANAGEMENT PROGRAM

## FY 2002 OVERVIEW

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To ensure that WMP remains competitive and provides a high performance operation including improvements to the technical and managerial capacities that will enhance service quality, customer service and financial planning, WMP closely monitors the information listed below.

	FY 2000	FY 2001	FY 2002
Sewer Service Charge, \$/1,000 gallons	\$2.70	\$2.81	\$2.88
Treatment Plant Costs, \$/MGD	\$994	\$1,140	\$1,140
Sewer System Overflows, Number/Mile of sewer	23	20	15
Treatment Plant Discharge Violations per year	0	0	0
Odor Complaints per year	30	20	15

The Wastewater Planning and Monitoring Division (WPMD) is responsible for the agency's financial and engineering planning along with wastewater monitoring. The WPMD continues to effectively monitor the long-term planning needs for the WMP in terms of infrastructure upgrades and expansion requirements. The WPMD is also responsible for developing a rate structure to adequately recover system costs, and plan for treatment expansion and improvement projects to keep pace with increased wastewater flows, and more stringent treatment requirements.

The Wastewater Management Program is comprised of seven separate funds under a self-supporting fund structure (Enterprise Fund) consistent with Sewer Bond Resolution adopted by the Board of Supervisors in July 1985. For more detailed information of the operational aspects of the various programs, refer to the narrative of Fund 401, Sewer Operation and Maintenance, which immediately follows this Overview. The following is a brief description of the seven active funds:

- ◆ **Fund 400 - Sewer Revenue** is used to credit all operating revenues of the system, as well as most of the interest on invested fund balances. Revenues recorded in this fund are transferred to the various funds to finance their expenditure requirements. The remaining fund balances are used to set aside funds for various reserves and future system requirements.
- ◆ **Fund 401 - Sewer Operation and Maintenance** provides funding for the four divisions responsible for the management and operation of the program, supported by a transfer from Fund 400.
- ◆ **Fund 402 - Sewer Construction Improvements** provides funding for the repair, rehabilitation, and improvement requirements of the entire program.
- ◆ **Fund 403 - Sewer Bond Debt Service** is used to record principal, interest and fiscal agent fees for the 1986 and 1996 Sewer Bond Series, as well as all parity debt payments for other jurisdictions with whom Fairfax County maintains interjurisdictional agreements.
- ◆ **Fund 406 - Sewer Bond Debt Reserve** provides debt reserve funds for the 1986 and 1996 Series of Sewer Revenue Bonds in accordance with the current Sewer Bond Resolution.
- ◆ **Fund 407 - Sewer Bond Subordinate Obligations** was established in 1992 to record all debt service payments on the UOSA 1991 Revenue Bonds and all subsequent Upper Occoquan Sewage Authority (UOSA) and Alexandria Sanitation Authority (ASA) revenue bonds. All future issues or refinancing of debt arising from interjurisdictional capacity rights may be treated as subordinate obligations of the System as provided by the General Bond Resolution for Sewer Revenue Bonds.
- ◆ **Fund 408 - Sewer Bond Construction** was established in 1987 for major program construction projects, which are funded from the issuance of sewer revenue bonds and/or program revenues.